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Design of Digital Electricity Meter

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Common Electricity meters, which are currently used in houses, shops and some factories are bulky expensive and inaccurate. Such features are incompatible with modern technological trends of miniaturization accuracy and neat devices. This project presents the design and the model of a low cost digital energy meter to overcome the short comings of the present meters. It is anticipated that a new neat design based on integrated circuit technology employing digital measurement techniques will have a great impact on electricity meters locally and worldwide. With a data storage capability and some form of processing, it can provide the consumers with vital information on the trend of their energy consumption. Such information will assist them in rationalizing their consumption. Intelligent energy meters may be seen as most suitable and efficient way to facilitate easy solutions to the problem of rational consumption.

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Security Framework for RFID Dynamic Traffic Management

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Automated traffic control in roaring metropolises can be one of the major issues in our time. The current static security framework is prone to violation of data privacy and information security. This project proposes a feasible security framework for a dynamic traffic control management system. Secure RFID technology with appropriate algorithms and database applied to a Dynamic Traffic Management is able to provide an efficient time management scheme. In previous approach, it is generally assumed that all RFID tags use a default static RFID security. Therefore, the RFID community bears the responsibility to develop techniques and methods of RFID Security to overcome the problems posed by the open Internet technologies, which are anticipated to create a revolution in traffic control management especially in roaring metropolises.

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Unmanned Aerial Vehicle Platform

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Unmanned Aerial Vehicles are in great demand nowadays, because they can perform functions almost impossible by other means. This project employs a low cost platform for aerial surveillance and monitoring. This system can be operated easily to give live TV images in real time. It comprises a remote control system of a camera mounted on a pan-tilt mechanism that provides 2-degrees of freedom, which can be enhanced by a zoom control. The payload restrictions of only 2 kg are met by suitable design and proper selection of light weight components. A patch antenna is used in the video transmitter-receiver system. Live TV tracking, which has been developed earlier, can also be incorporated to auto-track maneuvering ground targets from a remote location.